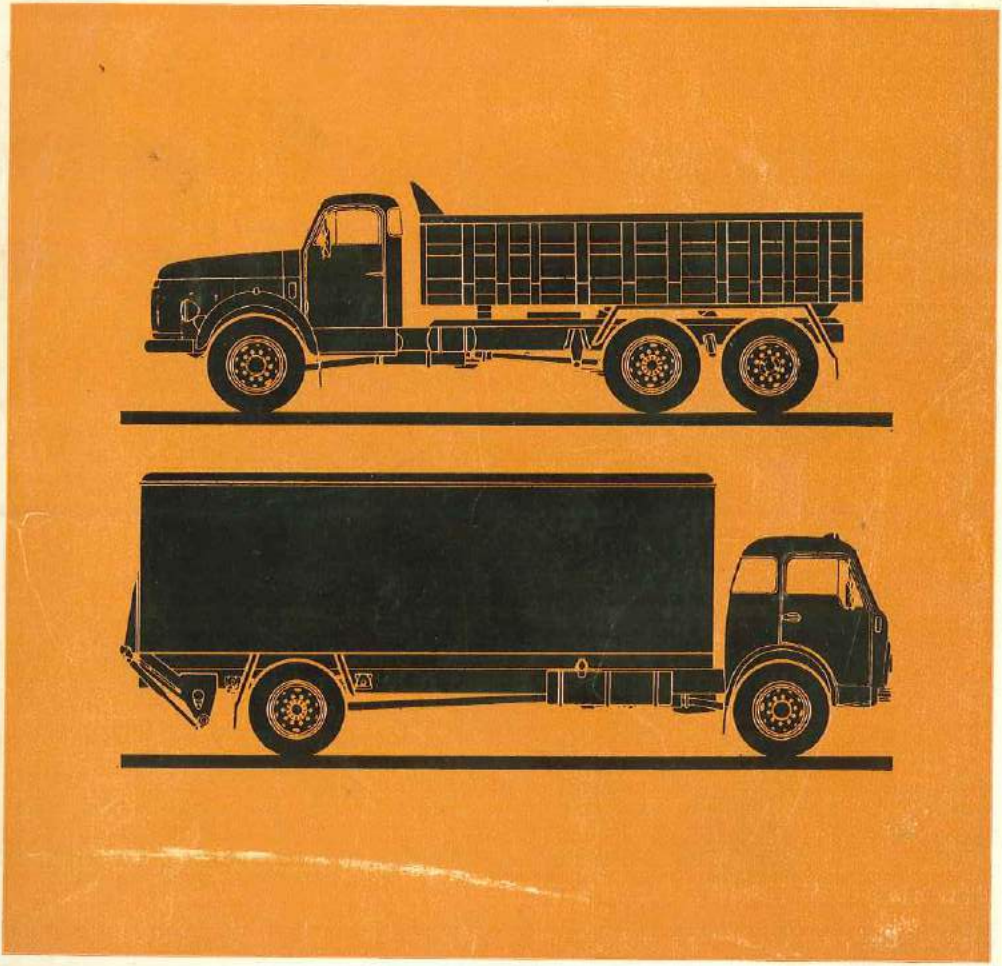
VOLVO

INSTRUCTION BOOK

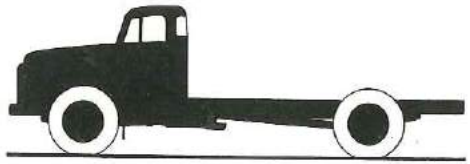
86-SERIES



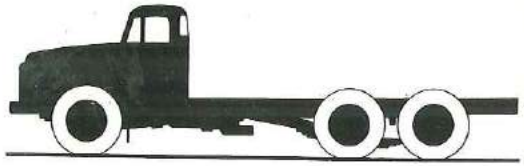
INSTRUCTION BOOK VOLVO 86-SERIES

This instruction book deals with the truck models belonging to the Volvo 86-series:

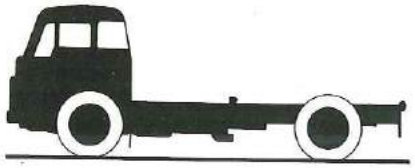
N 86



NB 86



F 86



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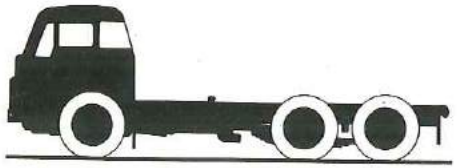


The text and illustrations contained in this book refer to all these four models unless otherwise indicated.

This instruction book contains all the information you require in order to operate and maintain your truck in the best possible way.
If you follow the advice and instructions contained in this book, your truck should meet the demands on good running economy and performance you have every right to expect of a quality vehicle.
The instruction book does not claim to be a completely comprehensive technical manual or to train the reader to be a perfect mechanic. It merely tells you how the truck should be looked after in order to avoid possible trouble in the future. Naturally the better you get to know your truck, the better service it will give you.
For more detailed description of repair instructions, adjustments, etc., you are referred to the special service manual for the truck. This manual can be purchased from your dealer. The technical data and constructional details in this instruction book are not binding. We reserve the right to make alterations without previous notification.

AB VOLVO • GÖTEBORG, SWEDEN

Volvo service

Volvo has built up an extensive service organization in order to ensure that you, as the owner of a Volvo truck, can get the best possible running economy from it. Top-modern workshops and specially trained personnel are at your service.

Continuous and progressive product development work takes place at the Volvo factory. All information and design modifications resulting from this work often requires amendments to instructions concerning repairs and adjustments. These instructions are issued as quickly as possible to all the workshops included in the Volvo service organization. The workshops are equipped with modern machines and measuring instruments, as well as special tools designed by Volvo. All Volvo dealers have a well-organized comprehensive stock of parts so that you can be assured of a ready supply of genuine Volvo parts. Volvo dealers are thus best suited to provide first-class service and they should be consulted if information not included in this instruction book is required.

Inspections

A Warranty Booklet is supplied with each vehicle when delivered. This booklet contains two coupons which entitle you to free inspections after 2 500 km (1 500 miles) and 10 000 km (6 000 miles). If possible, let the dealer who supplied the vehicle carry out these inspections. In exceptional cases, however, you can have them done by any other authorized Volvo workshop. **Our six-month guarantee only remains valid providing that the two above-mentioned free inspections are carried out at about the correct mileage and that the vehicle is serviced in accordance with the instructions given in this book.**

To ensure that your truck is given first-class service throughout its lifetime, you should make arrangements with your Volvo dealer concerning subsequent regular inspections.

Contents

Type designation

1 **Gross laden weight plate.** Accompanies chassis unattached on **N 86, NB 86. On the F 86, FB 86** it is placed at the front underneath the seat.

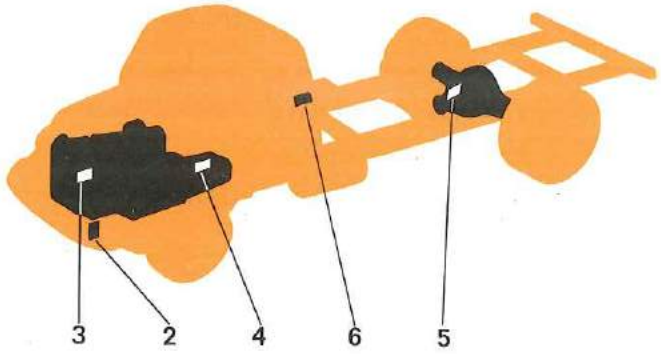
2 **Chassis number plate.** Located at very front on left frame member on **N 86, NB 86. On the F 86, FB 86** at the front underneath the seat.
Type designation and chassis number are also stamped on front part of right frame member.

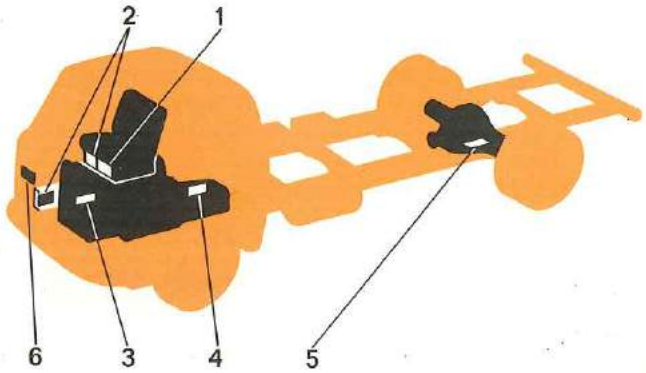
3 **The type designation, part number and serial number of the engine** are stamped on the left-hand side of the engine.

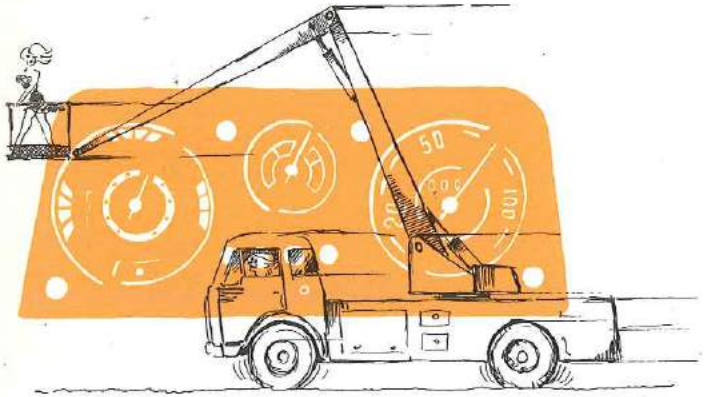
4 **Gearbox plate.** Located on right-hand side of gearbox.

5 **Final drive plate.** Located on final drive housing.

6 **Cab number.**



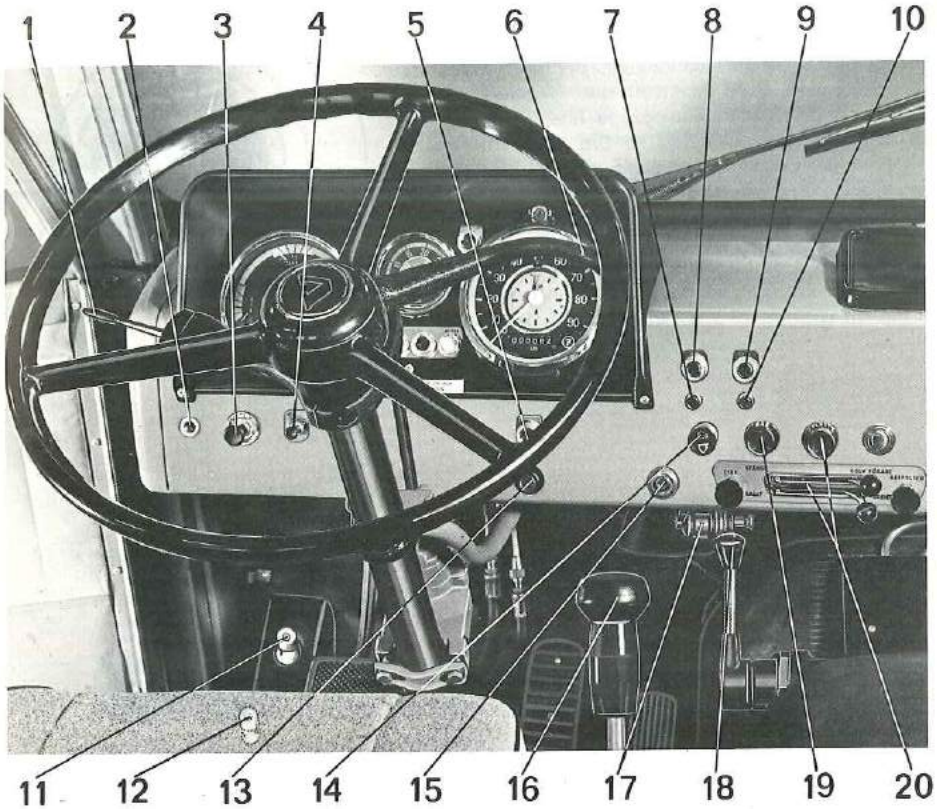


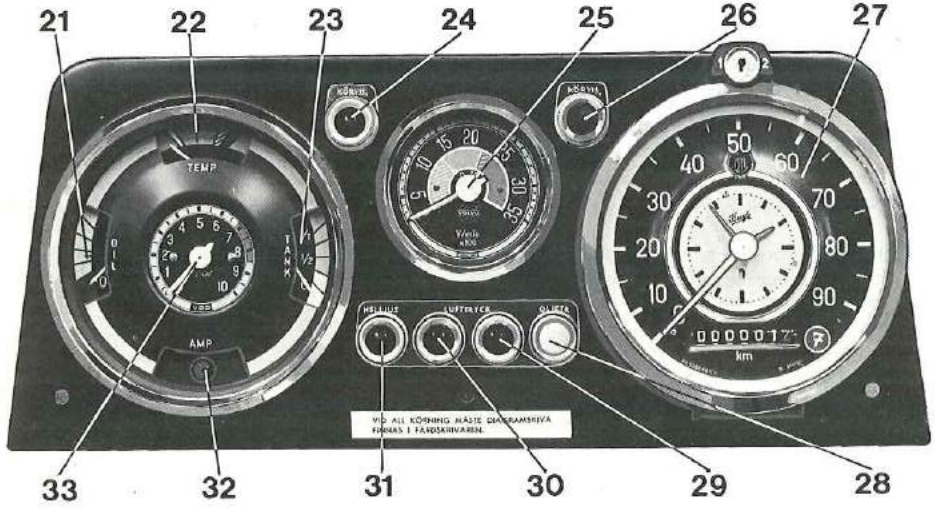


OPERATING INSTRUCTIONS

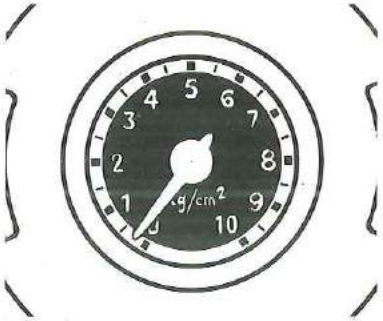
Before you start driving your truck, get to know where the instruments and controls are located.
Always make it a habit after starting and now and again during driving to check that the instruments are functioning properly.

INSTRUMENTS AND CONTROLS F 86





Air pressure gauge



The air pressure gauge indicates the pressure available in the compressed air reservoirs for the front and rear wheel circuits. The gauge has two pointers. The white pointer indicates the pressure for the front wheel circuit and the red one for the rear wheel circuit.

Never drive the vehicle when the warning lamps for the compressed air are on.

Warning lamps, air pressure, red

The warning lamps lights when the air pressure in one of the brake circuits is below 3.8—4.6 kp/cm² (54—65 p.s.i.).

Never start driving as long as the warning lamps are on.

Should the warning lamps go on during driving, stop the truck immediately and investigate the reason for the drop in pressure.

Hand control, parking brake
Warning lamp, parking brake

When the hand control is in the forward position with a charged compressed-air system, the parking brake is disengaged.

Moving the control back gradually applies the parking brake. When the control is back all the way, the parking brake is fully on.

The warning lamp will light when the control is moved back and will remain on as long as the brake is applied. **Do not drive as long as the warning lamp is on.**

Exhaust brake switch

The exhaust brake should be used when necessary on downhill runs in order to save the ordinary brakes. It can also be used to assist the footbrake when slowing down. The exhaust brake is effective at high speeds (1500 r.p.m. and upwards). However, the engine speed must not exceed 2400 r.p.m. The exhaust brake functions as long as the switch is kept pressed down. It must not be used to stop the engine. There is a separate stop control for this purpose.

Use the exhaust brake daily to avoid gumming from carbon deposits.

Hand control for trailer brakes

The trailer can be braked separately without affecting the braking system of the towing vehicle by means of the hand control under the steering wheel. When the brake pedal is operated, however, the brakes of both the towing vehicle and trailer are applied.

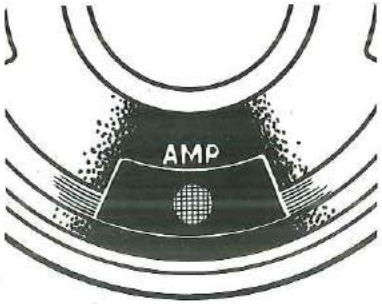
The hand control shiuld be in the front (upper) position when driving. Moving the hand control back applies the trailer brakes gradually. Jackknifing can be avoided by using this control.

Do not forget to move the control back after braking.

This control must not be used as a parking brake.

Warning lamp, battery charging, red

This lamp lights with a steady, red glow when the battery is discharging. Should the lamp light during driving, either there must be a fault in the electrical system or the alternator drive belt is insufficiently tensioned and slips on the alternator pulley, this resulting in poor charging.



Switch, headlights

Pulling the switch out one notch, switches on the parking lights front and rear. Pulling it out fully, also switches on the headlights.

Foot dipper switch

The foot dipper switch is used for switching between fullbeam and dipped headlights.

Warning lamp, fullbeam headlights, blue

The warning lamp lights when the fullbeam headlights are switched on.

Switch, instrument lighting

Pulling out the switch turns on the lighting for the combined instrument, the revolution counter and tachograph or speedometer, providing that the switch for the headlights is also pulled out.

Direction indicator lever switch
Warning lamp, direction indicators, tractor unit, red
Warning lamp, direction indicators, trailer, red

Moving the lever switch upwards switches on the right direction indicator, and downwards the left direction indicator. The warning lamp for the tractor unit and trailer, if one is attached, will blink in unison.

Windscreen wiper control, N 86

Turning the control clockwise engages the windscreen wipers. The wiper speed can be infinitely regulated. Turning the control anti-clockwise to its stop position returns the wipers to parking position and stop.

Never let the windscreen wipers operate on a dry and dusty windscreen since this might scratch the glass and score the blades.

Windscreen washer switch, N 86

To switch on the windscreen washers, pull the switch straight out. The fluid container is the located in the engine compartment and has a capacity of approx. 1.5 litres (2.6 Imp. pints = 3.2 US pints).

Switch for windscreen wipers and washer, F 86

The windscreen wipers operate at low speed when the switch is pulled out one notch. When the switch is pulled out fully, the wipers operate at high speed. Turning the switch clockwise, engages the windscreen washer.

The fluid container for the windscreen washer is located to the right under the dashboard and has a capacity of approx. 1.5 litres (2.6 Imp. pints = 3.2 US pints).

Never let the windscreen wipers operate on a dry and dusty windscreen since this might scratch the glass and score the blades.

Power point

The truck is fitted with a power point for connecting up an inspection lamp, etc.

Stop control

On the N 86, NB 86, the stop control is placed on the dashboard and on the F 86, but the FB 86 has it on the floor behind the gear lever.

To stop the engine, pull out this control. This stops the fuel injection pump and thus prevents fuel from being pumped into the cylinders. The control should not be pulled out when the vehicle is parked. Also do not forget to switch off the key switch.

To push the stop control back in, it must first be turned 1/4 turn clockwise.

Key switch

The key switch must be switched clockwise before the engine can be started. It must remain in the switched-on position during driving. Its function is also to switch on the electric equipment.

Starter button

Press in the starter button to start the engine. Release it as soon as the engine has started.

Accelerator pedal
Hand throttle control

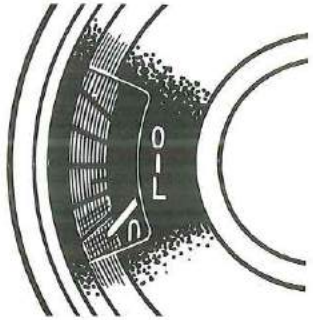
In addition to the accelerator pedal there is also a hand throttle control. This is used to give the engine the desired speed when starting and idling, also when driving auxiliary units.

Warning lamp, oil pressure, yellow

The warning lamp lights when the oil pressure goes below 0.5 kp/cm² (7 p.s.i.). Do not drive as long as the lamp is on.

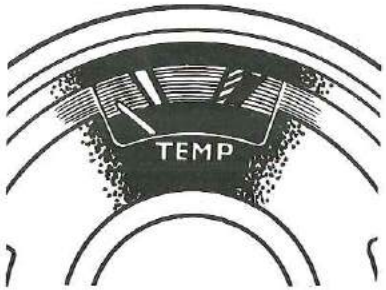
Oil pressure gauge

The function of the oil pressure gauge is to indicate the pressure of the oil in the engine lubricating system.
Oil pressure is dependent on engine speed and temperature and also by the viscosity of the oil used. **Normally, the oil pressure should be between 3—5 kp/cm² (43—71 p.s.i.) when driving with a warm engine.** If the pressure drops to 0.5 kp/cm² (7 p.s.i.) and below, the oil pressure lamp lights.
NOTE. Should the oil pressure drop below 0.5 kp/cm² (7 p.s.i.) with a warm engine idling, this does not necessarily mean that there is something wrong as long as the pressure during driving does not go below about 3 kp/cm² (43 p.s.i.).



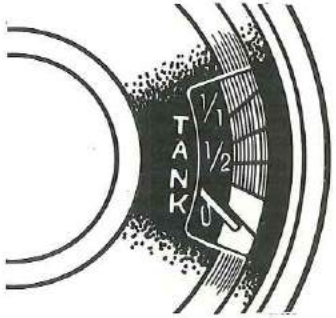
Temperature gauge

The temperature gauge indicates the temperature in the engine cooling system and thereby also the **engine operating temperature, which should be between 70—85° C (158—186° F).** The light-grey field covers the temperature range between approx. 60 and 95° C (140—203° F).
With very warm weather, the gauge pointer may point occasionally to the red-lined field.



Fuel gauge

The fuel gauge is divided up into six different fields, the two extreme down being of another colour. The fuel tank does not have a reserve compartment. When the gauge pointer is at 0, the tank is empty.



Tachograph
1 Warning lamp
2 Lock and switchover for changing drivers
3 Speedometer
4 Running control
5 Mileometer
6 Clock

Tachograph (or speedometer)

The tachograph is of the 7-day type. In other words, the instrument has charts which record the speed, total distance driven and time taken during a period of 7 days. The instrument can be read from the driver's seat. It also has a running control, which tells the driver whether the instrument is functioning or not. A warning lamp lights when speed exceeds 70 km.p.h. (44 m.p.h.). Changing the recording charts in conjunction with a change of drivers is done by means of one of the accompanying keys marked 1 or 2.

The recording charts are changed and the clockwork wound up once a week as follows:

1 Open the instrument with the key.
2 Remove the retainer (bayonet fitting) and the recording charts.
3 Wind up the clock by pulling out the lever at the side and moving it forwards and backwards until there is resistance from the winding pawl.
4 Insert a new set of recording charts after entering the relevant particulars. Check that the edges of the charts are not turned up and that the charts with small strips are attached to each other, since this is essential for 7-day registration.
5 Turn the charts so that the actual time is opposite the red mark on the plate and fit the retainer.
6 Close the instrument and remove the key.

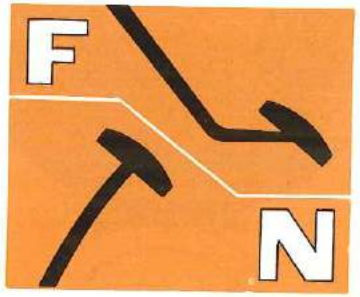
CAUTION: The instrument must not be opened whilst driving. If it is opened for any reason other than replacement of charts, the used (loose) charts must be removed before the instrument is closed. Neglect to do this would damage the sapphire stylus.

Revolution counter

The revolution counter indicates the engine speed in hundredths of r.p.m. Among other things, it is extremely useful for indicating the following:

(1) Low speed range
(2) Operating range. During driving the engine speed should be kept within 1300—2200 r.p.m. as far as possible.
Maximum recommended speed with continuous load (e.g. lengthy driving on motorway) is 2200 r.p.m.
(3) Acceleration range. This is momentarily permitted, for example, with acceleration and gear-changing.
(4) This range is marked completely in red and must not be used.

Clutch pedal



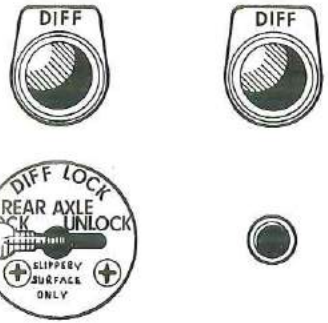
The clutch pedal has only two correct positions: fully depressed or fully released. Avoid clutch slip as far as possible.

Gear lever with selector switch

Concerning gear-changing, see page 29.

Control, differential lock
Warning lamp, differential lock

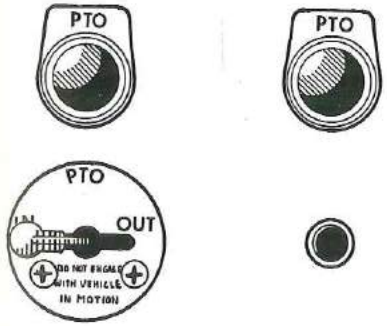
On the N 86, NB 86 the differential lock is engaged by moving the control to the left. On the F 86, FB 86, the switch is pulled straight out. When the differential lock is engaged, the warning lamp lights.



The differential lock may only be used on a slippery surface. If possible, engage the differential lock just before reaching the slippery surface. It can be engaged during driving irrespective of speed and even under load.

NOTE. Disengage the differentil lock when about to enter a bend where the road is firm. This is particularly important when the vehicle is loaded. Neglect to do this might run the risk of breaking a drive axle. Disengage the lock **before** the bend, since it cannot be disengaged in the bend.
The differential lock must not be engaged when one of the drive wheels is spinning.

If it has to be engaged on such an occasion, this should be done as follows:
Depress the clutch pedal, engage the differential lock and ease up on the clutch pedal (a suitable gear must, of course, be engaged). To engage the differential lock with each wheel spinning will unavoidably lead to damage to the claw coupling on the lock.

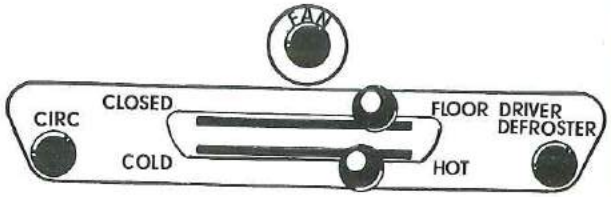


Switch, power take-off
Warning lamp, power take-off

For the R 51 gearbox there are two different types of power take-offs: a side unit and a rear one. The power take-offs are engaged as follows:
Depress the clutch pedal, wait about 5 seconds and engage the power take-off.
Release the clutch pedal.
The power take-off should not be engaged during driving.
If for some reason or other it has to be engaged during driving, **gear-changing must not** take place otherwise the synchronizers will be severely worn owing to the additional load.

Heater and ventilation control, F 86

The truck is fitted with a combined heater and fresh-air system.
The heating system is thermostat-regulated and is provided with a fan and fresh-air shutters.
The air intake is placed in front somewhat under the windscreen.



The speed of the heater fan is controlled by the switch FAN.
Pulled out to first notch = full output
Pulled out fully = half output

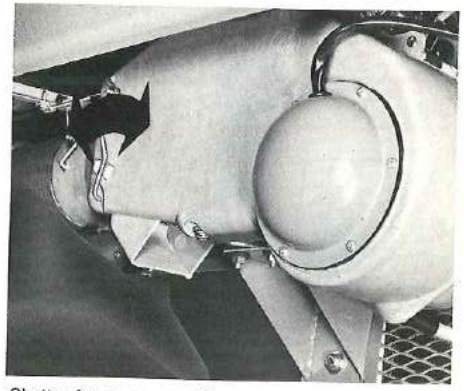
The pull control CIRC regulates the flow of incoming fresh air.
Pushed in = fresh-air shutter open
Pulled out = fresh-air shutter closed
When the control is pulled out, air is taken from the cab for the heater.

The upper push control SHUTTER FLOOR DRIVER, regulates the flow of air to the space round the driver's feet.

The lower push control regulates the temperature.
With control DEFR pushed in = defroster shut closed: pulled out = defroster open.

In addition to these controls, there is a shutter for controlling air to the floor on the passenger's side. This shutter has three positions: left position — fully open, intermediate position — half open, and right position — closed.

Max.cab heating is obtained with the following:
Fan switch at full output and temperature control at max. heating.
Shutters for floor ventilation (driver's and passenger's) fully open. Fresh-air control closed. Poor defroster effect is obtained with this arrangement but can be useful when idling.



Shutter for passenger flow space

To obtain better **defroster effect** (with normal driving), the fresh-air intake should be opened somewhat and the defroster control opened fully at the same time.
In order to obtain **max. defroster effect,** the fresh-air intake should be fully open and the controls for driver and passenger fully closed. This arrangement should be used when there is considerable dampness in the air.
NOTE. It is not always necessary to use the fan motor. The overpressure formed in the air intake when driving is often sufficient.

Important. The fresh-air intake for the heater should be closed when washing the car.

Heating and ventilation controls, N 86

The switch marked FAN to the left regulates the speed of the heater fan.
Pulled out one notch = full output.
Pulled out fully = half output.
The upper push control regulates air flow to windscreen or floor.
The lower push control regulates the temperature.
The FRESH AIR control regulates the flow of incoming fresh air.
The right switch marked FAN is intended for an extra heater if fitted.
Pulled out one notch = full output.
Pulled out fully = half output.

Driver's seat 1

Adjusting length and elevation

The seat can be adjusted forwards or backwards by releasing the catch (1). This automatically alters the seat elevation. To adjust support the feet against the floor and move the seat to the most comfortable position.

Adjusting seat springing

The springing can be adjusted to suit the weight of the driver. Release the catch on the lever (2) and move the lever upwards or downwards until the springing is ideal for the weight of the driver.
The springing is properly adjusted when the spring indicator (3) is in line with the side plate when the driver is seated.

Adjusting backrest inclination

The inclination of the backrest is adjusted by pushing down the latch at the lower edge of the backrest and then adjusting the backrest to the desired angle.

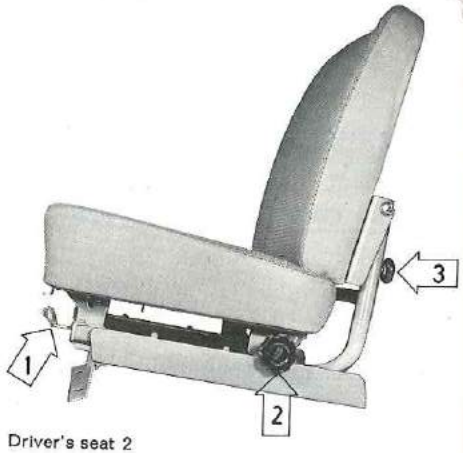
Driver's seat 2

1 Latch for moving seat forwards and backwards.
2 Control for adjusting seat height.
3 Control for adjusting backrest angle.

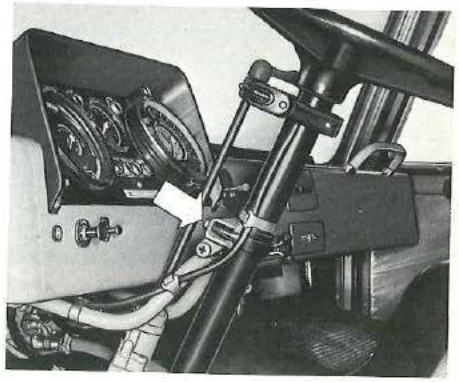
Steering wheel, F 86

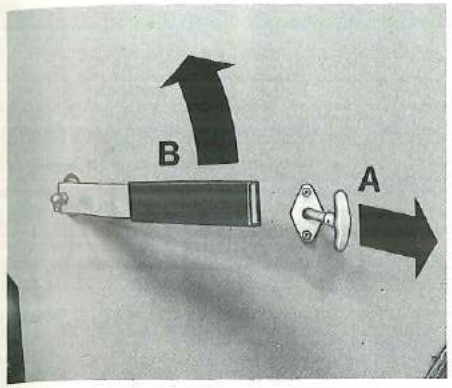
The steering wheel angle is altered by slackening the nuts on the bracket and adjusting the steering wheel to the desired position. After adjusting tighten the nuts well.

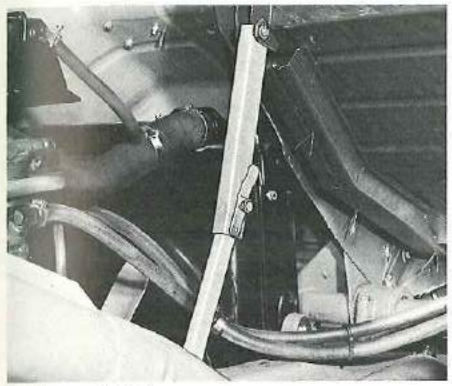
Driver's seat 1



Driver's seat 2

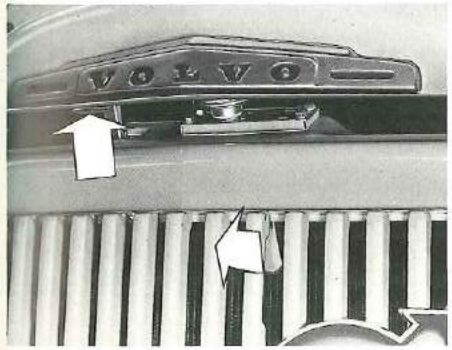





Latch arm locked

Cab, F 86

Before tilting up the cab, first check that the doors are closed and that the front wheels point straight forwards.
Pull out the handle for the safety latch (A). Then turn up the lock handle (B) and the cab can be tilted up.
Tilt the cab up to its max. position and the latch arm is locked according to the picture.
Make absolutely sure that the tilted-up cab is properly secured before carrying out any work underneath it.
To fold down the cab, squeeze the latch on the latch arm and tap the arm carefully backwards while supporting the cab at the same time so that it does not drop down.
When the cab locks in its closed position the safety latch engages with a powerful click. **If this sound is not heard, it means that the safety latch has not engaged, so it must be checked and, if necessary, lubricated** (see page 98).
When the cab is in the closed position, lock it with the lock handle.



Engine bonnet, N 86

To open the engine bonnet, first move the lock handle to the left. This opens the bonnet a little bit. Then press the safety catch upwards and lift up the bonnet fully.

STARTING AND RUNNING

Running-in

When the truck is new, a certain caution is recommended, especially during the first 5 000 km (3 000 miles).
During running-in do not take out full output for more than short stretches.
Avoid high speeds. Instead, let the engine operate at 400—500 r.p.m. below the maximum speed permitted.
Do not drive with full load and avoid dragging. In the beginning the brakes should be used with a certain amount of caution in order to obtain good contact between drums and linings.

Lubricating instructions for running-in

During the running-in, the moving parts of the vehicle should be given an opportunity to bed down in order to stand up to future arduous service. For this reason, the oil should be changed more frequently during the running-in period than is normal later on.
The first engine oil change should take place after 1 000 km (600 miles). The next oil change should be carried out in conjunction with the first free warranty inspection after 2 500 km (1 500 miles). Subsequent oil changes should be made at the intervals specified on page 38.
During the running-in, the engine lubricating oil filter should be replaced after the first 5 000 km (3 000 miles). Thereafter it should be changed every 10 000 km (6 000 miles).
The oil and the oil filter in the gearbox, also the oil in the final drive, should be changed after the first 5 000 km (3 000 miles), on which occasion the gearbox and final drive should also be flushed clean. Subsequent oil changes are according to the intervals given on page 39.
All Volvo engines are test-driven before delivery, first on a test bench and then road tested in the truck. We do this to ensure that all fits are satisfactory. Therefore, we cannot accept responsibility for damage caused by careless running-in.

Procedure before starting

1 **Check coolant level**

The level should be up to the plate tab in the radiator filler opening.
If necessary top up as follows:
water + glycol — wintertime
water + rustproofing — summertime
A more detailed description is to be found under "Servicing" on page 57.

2 **Check oil level in engine crankcase**

The oil level should be between the dipstick marks.
If the level is below the lower mark, top up with oil of the same grade used in the engine.
3 If the engine has been idle for some time or if the fuel system has been open for repairs, etc., vent the fuel system.
4 Check lighting, stop lights, turn indicators and horn. Wipe clean lamps and reflectors.

Starting the engine

1 Check that the parking brake is engaged.
2 Check that the gear lever is in neutral.
3 Push in the stop control.
4 Switch on the key switch.
5 Push in the starter button and keep the accelerator pedal **fully depressed** until the engine fires. (For starting during cold weather, see next page.)
Never race the engine.
6 Check that the warning lamps for the compressed-air system go out when the pressure in the brake circuits reach 3.8—4.6 kp/cm² (54—65 p.s.i.) and that the operating pressure in the brake system is normal. (See page 83.)

Test the brakes before driving off.

Starting the engine in cold weather

To facilitate starting in cold weather there is a special cold start device on the fuel injection pump. To ensure that this device functions properly, proceed as follows:

A Depress the accelerator pedal to the floor (to facilitate point B) (for turbo engine).

B Pull out the hand throttle as far as possible (turbo engine).

C On the F 86 pull the chain at the rear of the cab straight back and then release it.
On the N 86 with turbo-engine pull the eyelet shaft on the front of the fuel injection pump straight out.
On the N 86 with an aspirated engine, there are two different types of injection pumps, a CAV in-line pump and a CAV distributor pump.
On the CAV in-line pump, the cold start is engaged by pulling out the stop lever axially.
On the CAV distributor pump engagement takes place by moving the cold start control on the centrifugal governor to the one side and then releasing it.

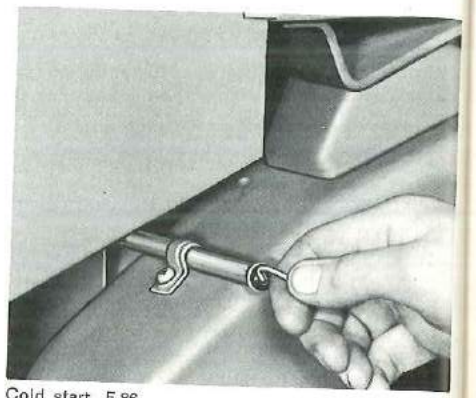
NOTE. There may be a slight delay before the cold start engages owing to viscous oil.
Where extremely cold weather is anticipated, subsequent starting of the engine can be facilitated by engaging the cold start device after completing driving for the day. Since the stop control cannot be pulled out then, the vehicle must be parked with the gear lever in neutral. Moreover, measures must be taken to ensure that the vehicle does not roll.

D Depress the accelerator pedal to the floor.

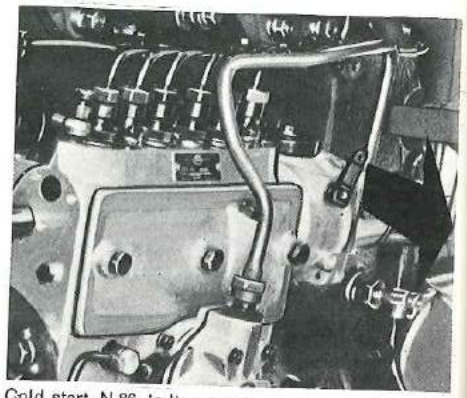
E Push in the hand throttle (to avoid engine racing when starting).

F Start

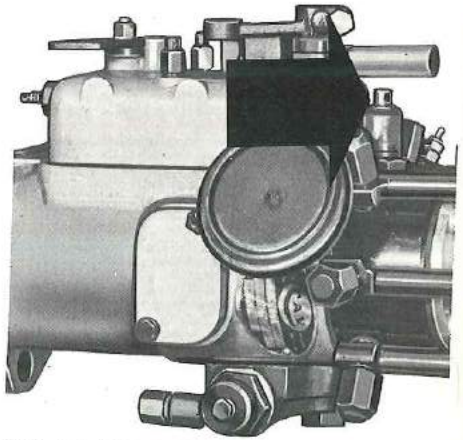
Do not race the engine.



Cold start, F 86



Cold start, N 86, in-line pump



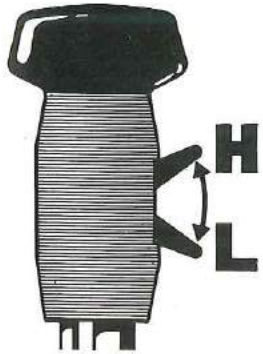
Cold start, N 86, distributor pump

Warming up the engine

Never race a cold engine. When the lubricating oil is cold, it is so viscous that it cannot penetrate to all the lubricating points in the engine, so that there is always risk of seizing occurring. This applies particularly to the turbo-compressor. **Do not warm up the engine by only letting it idle. Start driving it under light load when normal oil pressure has been reached and the compressed-air system has enough pressure to release the parking brake.** In other words, this means that a gear lower than normal should be engaged and the engine speed should exceed the maximum permitted by 400—500 r.p.m.

Avoid dragging and high speeds.

Never max. load the engine until it has reached normal operating temperature.



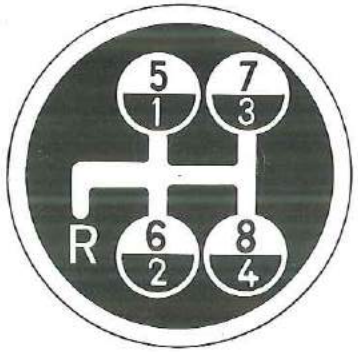
Gear-changing

The R 51 type gearbox is an 8-speed fully synchronized unit. It consists of a 4-speed front section (basic unit) which is operated with a gear lever, and a 2-speed compressed-air operated rear section (auxiliary unit) which is used for engaging the high and low speed ranges.
Gear positions 1 to 4 cover the low speed range, positions 5 to 8 the high speed range.
Changing between low and high speed ranges is done with the toggle switch on the gear lever.
When starting and driving at **speeds up to approx. 20 km.p.h. (15 m.p.h.) use the 4-speeds with the toggle switch at LOW.**
When driving at **speeds above approx. 20 km.p.h. (15 m.p.h.) use the 4-speeds with the toggle switch at HIGH.**

Since the HIGH-speed range is used for more than 90 % of the driving, the gearbox is as easy to operate as a normal 4-speed gearbox.
Start the truck in a gear sufficiently low that the drive-off is smooth and the clutch does not need to slip (e.g. loaded truck in 1st and empty truck in 3rd or 4th gear).
Always try to let the engine operate within its effective operating range, that is between 1 300—2 000 r.p.m.

Drive according to the revolution counter.

When changing to a higher gear the gear lever should be held in neutral before engaging. When changing down to a lower gear, it is suitable not to ease up on the accelerator pedal and to move the gear lever rapidly. This will give the engine a chance to increase its speed to a suitable r.p.m. in order to counteract the higher reduction ratio.
Never change down at excessive speed, e.g., when engine braking on downhills. This could damage the engine and power transmission. Choose the time for changing gear in accordance with the revolution counter.



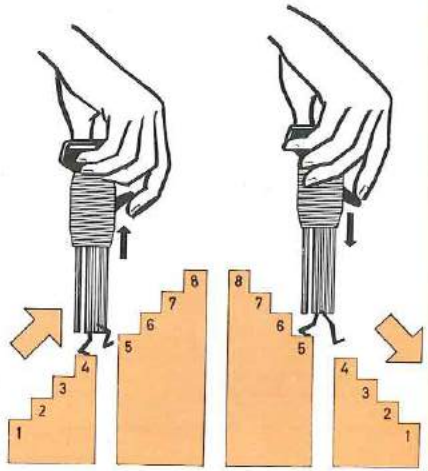
Gear-changing up is as follows:

A Changing from 1st to 4th gear is the same as with a normal 4-speed gearbox.

B Move the toggle control from LOW to HIGH with the gear lever in 4th.

C Engage 5th gear by moving the gear lever to 1st. The high gear register automatically engages when the gear lever is moved through neutral. **The gear lever is locked in neutral during the interval when changing from LOW to HIGH.**

D Changing from 5th to 8th gear is the same as for a normal 4-speed gearbox. In other words, 5th gear has the same position as 1st, 6th the same as 2nd, 7th the same as 3rd, 8th the same as 4th.



Changing down takes place in the reverse direction. Pre-select by moving the toggle control from HIGH to LOW with the gear lever in 5th **(The speed must not exceed approx. 20 km.p.h. (15 m.p.h.).**
Pre-selecting with the toggle control should not be carried out until gear-changing is about to take place.

With low ambient temperatures, the oil in the gearbox is viscous and the time for changing from HIGH to LOW can be somewhat longer than normal until the engine has been run warm.

NOTE. **Reversing should only be carried out with the toggle control in LOW. The reverse gear is not synchronized so that changing must under no circumstances take place between HIGH and LOW during reversing.**

NOTE. If the air pressure is too low, the auxiliary gearbox can remain in disengaged position and the gear lever is then locked in neutral. When the air pressure increases, the auxiliary unit normally engages and the gear lever can be moved to the gear intended. If the gear lever still locks in spite of the fact that the air pressure has increased to above 4 kp/cm² (57 p.s.i.), move the toggle control on the gear lever to the opposite position and then back again. It should then be possible to engage with the gear lever.

Stopping the engine

If the truck has been subjected to particularly hard driving, the engine should be allowed to idle for about one minute before being stopped in order to minimize thermal stresses in the engine and avoid the loss of cooling water which could occur if the water circulation in the engine is interrupted.
When the engine is to be stopped, pull out the stop control. This stops the fuel injection pump which ceases to pump fuel to the cylinders.
Let the stop control remain in the pulled-out position until the next start. Do not forget to switch off the main switch key.